

Title (en)

Controlled simultaneous analog and digital communication.

Title (de)

Regelung gleichzeitiger analoger und digitaler Kommunikation.

Title (fr)

Contrôle de communication analogue et numérique simultanée.

Publication

EP 0630130 A2 19941221 (EN)

Application

EP 94304182 A 19940610

Priority

US 7651993 A 19930614

Abstract (en)

A method and apparatus for control of concurrent communication of analog information and digital information. In general terms, when the communication channel is viewed as a multi-dimensional space, the digital information signal is divided into symbols, and the symbols are mapped onto the signal space with a preset distance between them. The analog signal, generally limited in magnitude to less than the distance separating the symbols, is converted to component signals and added (i.e., vector addition) to the symbols. The sum signal is then transmitted to the receiver where the symbols are detected and subtracted from the received signal to yield the analog signal components. The transmitted analog signal is recreated from those components. Both half-duplex and full-duplex operation is available in accordance with this invention. The illustrative embodiment includes control means that is sensitive to input signals applied to the modem disclosed herein. To wit, the control is sensitive to signals from the analog port, signals from the digital port, and signals from the port that carries the combined digital and analog signals. Operation of the near-end modem is controlled as well as operation of the far-end modem. <IMAGE>

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